combined endpoint events the Group D, E increased significantly. OR values were 1.451 and 1.902.
Conclusions: Admission white blood cell count was an independent risk factor for short-term outcome in primary PCI with STEMI patients.

GW25-e4141

Predictive factor of 30-day mortality in hospitalized patients with acute myocardial infarction: A Cox-regression analysis in Beijing

Ke Xi[1,2], Zongbin Li[1], Jiayue Li[1], Haili Lin[1], Yusheng Zhao[1]
[1]Institute of Geriatric Cardiology, Chinese PLA General Hospital, [2]Headquarters clinic, Chinese People's Armed Police general hospital

Objectives: Despite advances in the management of patients with acute myocardial infarction, a variety of complications and death remain high during hospitalization of acute myocardial infarction. Therefore, it is important that the risk factors of 30-day mortality in patients with acute myocardial infarction are explored for improving the outcomes of acute myocardial infarction.
Methods: All hospital admissions with a discharge diagnosis of acute myocardial infarction were extracted from the Chinese PLA General Hospital Patients Information System Database from the January 1st in 2011 to the December 31st 2012. Cox's regression on mortality was performed using SPSS19 statistical software for the age, the sex, the history of diabetes, myocardial infarction, aerial fibrillation, stroke, chronic renal failure, anemia, or coronary artery bypass graft, the complication of cardiogenic shock, heart failure, ventricular fibrillation/ventricular tachycardia, atrioventricular block II, III degree, acute renal failure, gastrointestinal hemorrhage, or multiple organ dysfunction syndrome and the percutenous coronary intervention.
Results: Of 1869 cases, 91 (4.9%) patients (mean age 74.3 ± 10.9 years old) died. Among the patients, 1342 cases were male, and 437 cases female, mean age 61.1 ± 13.4 years old.. Univariate analysis showed age, sex, the history of diabetes, myocardial infarction, aerial fibrillation, stroke, chronic renal failure, anemia, or coronary artery bypass graft, complication of cardiogenic shock, heart failure, ventricular fibrillation/ventricular tachycardia, atrioventricular block II, III degree, acute renal failure, gastrointestinal hemorrhage, or multiple organ dysfunction syndrome and percutenous coronary intervention were predictive factors of 30 day mortality. Cox regression analysis indicated that the independent predictive factors of the 30 day mortality rate were the age (odds ratio [OR] 1.065, 95% confidence interval [CI] 1.042-1.089), the history of diabetes (OR 1.858, CI 1.190-2.901), or anemia (OR 2.893, CI 1.483-5.642), the complication of cardiogenic shock (OR 12.596, CI 7.454-21.193), ventricular fibrillation/ventricular tachycardia (OR 8.904, CI 4.000-19.821), acute renal failure (OR 3.753, CI 1 814-7.765), or multiple organ dysfunction syndrome (OR 4.060, CI 1.586-10.396), and the percutenous coronary intervention (OR 0.345, CI 0.204-0.583).
Conclusions: The age, the history of diabetes, anemia, the complication of cardiogenic shock, ventricular fibrillation/ventricular tachycardia, acute renal failure, multiple organ dysfunction syndrome and the percutenous coronary intervention are independent predictive factors of 30 days mortality in patients with acute myocardial infarction.

GW25-e4279

Effect of Intracoronary Anisodamine and Diltiazem Administration during Primary Percutaneous Coronary Intervention in Acute Myocardial Infarction

Peng Yuhong[1], Wei L[1], Wei Geng[2], Kun Xing[2], Leisheng Ru[1], Jiaan Sun[1], Yuying Zhao[1], Xianghua Fu[2]
[1]Department of Cardiology, Bethune International Peace Hospital, [2]Department of Cardiology, The Second Hospital of Hebei Medical University

Objectives: The development of microvascular reperfusion injury is associated with adverse clinical outcomes in patients with ST-elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (PCI). Upfront strategies to reduce the incidence of microvascular reperfusion injury could be considered for high-risk patients to improve outcomes. To examine the role of intracoronary anisodamine and diltiazem administration performed before stenting on the immediate angiographic and clinical outcomes.
Methods: STEMI patients with high-risk of no reflow presenting with primary PCI were randomized to 2 bolus injections of intracoronary anisodamine (1mg/5mL) and diltiazem (2mg/5mL) or diltiazem (2mg/5mL). The first bolus injection was given after guidewire and the second after the first balloon inflation. The primary endpoint was the incidence of no/slow reflow (TIMI flow grade≤2) immediately after stenting.
Results: A total of 108 patients were randomized to intracoronary anisodamine and diltiazem (COM group, n=54) or diltiazem (Diltiazem group, n=54). The percents of TIMI flow grade 3 was found higher in the COM group than in the Diltiazem group (92.6% vs 75.9%, p<0.05). TMPG 3 was obtained more frequently in the COM group than in the Diltiazem group (68.5% vs 46.3%, p<0.05). cTFC was significantly lower in the COM group than in the Diltiazem group (30 vs 44, p<0.05). COM group had showed low incidences of bradyarrhythmia and rapid arrhythmia (7.4% vs 24.1% and 3.7% vs 18.5%, respectively, p<0.05).
Conclusions: Intracoronary anisodamine and diltiazem administration before stenting improved the angiographic results and prevented reperfusion arrhythmia in patients with STEMI undergoing PCI.

GW25-e4324

MiRNA Expression and Identification of CD4+T Lymphocytes in Patients with Acute coronary syndrome

Gulao Zhang
the First Affiliated Hospital of Gannan medical university

Objectives: To screen differential microRNA expression profiles of CD4+T lymphocyte from the patients with acute coronary sysdrome (ACS) and the healthy controls by microarray analysis technique. To elucidate the mechanism responsible for modulation of CD4+T lymphocyte and provide insights into the effects of microRNA on ACS.
Methods: Ten patients with ACS were enrolled in the study, and ten patients with normal coronary artery angiogram were served as a control group. Blood samples were taken from peripheral vein and the CD4+T lymphocytes were isolated from mononuclear cells prepared with Ficoll-Hypaque density-gradients centrifugation from human peripheral blood by magnetic cell sorting system (MACS). The purity of CD4+T lymphocytes was measured by flow cytometry analysis. The viable count was detected by the rejection experiment of trypanblau. Total RNA was abstracted from CD4+T lymphocyte with Trizol reagent. McroiRNA was isolated and enriched of by use of Polyethylene Glycol from 40μg total RNA.The microRNA extracted from CD4+T lymphocytes was hybridized and microRNA expressions profiles of CD4+T lymphocyte were screened with the Affymetrix GeneChip microRNA array. The image signal was scanned by Affymetrix GeneChip Scanner 3000 and analysised by Affymetrix GeneChip Command Console™ 1.1 software. Then the image signal was transformed into digital information, which was analysised with SAM software. The differentially expressed microRNA were identified between the two groups. Real-time quantitative polymerase chain reaction (qRT-PCR) was used to confirm the result of selected genes from microarray analysis.
Results: The results showed that the expression of mcroiRNA-155, microRNA-21, microRNA-424 and microRNA-127-3p were over 1.5 folds up-regulated, and the expression of microRNA-30b and microRNA-181a were over 0.5 folds down-regulated in ACS group compared to the control group. The qRT-PCR results were in accordance with those obtained using microarray analysis.
Conclusions: The differentially expressed microRNA of CD4+T lymphocyte may participate in the the occuring and developing of ACS.

GW25-e4343

The Relation of RDW with the Severity of Coronary Artery Disease and Long-term Prognosis in ACS

Zhang Da, Peng Qu, Hongyan Wang
The Second Affiliated Hospital of Dalian Medical University

Objectives: Red Blood Cell Distribution Width (RDW) is an indicator which can react the degree of the dispersion of outer peripheral red blood cell volume. Recently, studies have shown that the baseline of RDW is closely related with various heart diseases. This study aimed to explore the changes of RDW in acute coronary syndrome (ACS), and to analyze the relation of RDW with the severity of coronary artery disease and long-term (two-year) prognosis.
Methods: A total of 218 patients (aged 27-85 years, 54.59% men) were enrolled in this study, including 140 patients with ACS and 78 patients without ACS. The group of ACS contained 60 patients with STEMI and 26 patients with NSTEMI and 54 patients with UA. All the patients had coronary arteriography (CAG), then Gensini score was calculated. All detailed records of general condition and results of the routine examinations were recorded. Every ACS patient had an interview by phone after two years to evaluate adverse cardiovascular events during the two years, such as angina pectorals grade of CCS raised at least of 1 grade, onset of heart failure, recurrencerecurrence of myocardial infarction, cardiac death. According to the thresholds of RDW determined by ROC curve analysis, ACS patients were divided into high-levels group and low-levels group, the incidence of long-term adverse cardiovascular events between the two groups was compared.
Results: (1) The average level of RDW was significantly higher in ACS group than it in control group [(12.81±0.55) % vs (12.28±0.41) %, P<0.001]. ACS patients with myocardial infarction had higher level of RDW than those without myocardial infarction [(12.92±0.57) % vs (12.63±0.46) %, P=0.001].(2) Spearman correlation analysis showed that RDW was positively associated with Gensini score significantly (r=0.463, P<0.001), and also positive linear correlated with coronary artery lesions (r=0.295, P <0.001).(3) ROC curve analysis showed that test performance was the best when RDW was 12.85%[area under curve=0.87, P<0.01]. There were 57 cases of adverse cardiovascular events during the two-year follow-up periods. Compared with low-levels group (RDW<12.85%), the incidence of long-term cardiovascular events of high-levels group (RDW≥12.85%) increased significantly (56.72% vs 26.03%, P<0.001). Logistic regression analysis showed that NT-proBNP (P=0.007), LDL-C (P=0.038), apolipoprotein-B (P=0.030) and RDW (P=0.010) were the predictors of long-term adverse cardiovascular events. (4) Spearman correlation analysis also showed that RDW was positively correlated with WBC, AST, LDH, cTnI, hs-CRP, NT-proBNP and LVED, while it was negatively relative with LVEF and MCV. Multiple stepwise regression analysis showed that RDW was positively correlated with WBC (r=0.232, P<0.001) and hs-CRP (r=0.352, P<0.001), while negatively correlated with LVEF (r=-0.213, P<0.001).
Conclusions: (1) The level of RDW in patients with ACS increased significantly, and ACS patients with AMI had higher level of RDW compared with those without AMI.

(2) RDW was closely related with Gensini score. Patients with more severe coronary artery disease had higher level of RDW. (3) RDW was relevant to the incidence of long-term adverse cardiovascular events in ACS patients.RDW might be one of the predictors for long-term adverse cardiovascular events in patients with ACS.(4)RDW was significantly correlated with WBC, hs-CRP, NT-proBNP and LVEF. High-levels of RDW in ACS patients might be correlated with inflammatory reaction and downgrade of cardiac function level.

GW25-e5136

Comparison of continuous platelet count method PL-11 with VASP for monitoring the platelet aggregation function

Cui Meihong, Wei Yujie, Jin Zhigeng, Liu Huiliang
Department of Cardiology, General Hospital of Armed Police forces

Objectives: To evaluate the clinical application value of platelet analyzer PL-11.
Methods: This study included 69 patients with non-ST-elevation acute coronary syndrome (NSTE-ACS) requiring selective percutaneous coronary intervention (PCI). Blood samples obtained at 6–12 hours after a 600mg loading dose of clopidogrel were assayed using continuous platelet count with PL-11 [adenosine diphosphate (ADP) as the agonist] and vasodilator stimulated phosphoprotein (VASP) assay. The results were described as maximal aggregation ratio (MAR) and platelet reactivity index (PRI) respectively. A PRI $\geq$ 50% was defined as high platelet reactivity (HPR). The platelet function of patients with HPR were detected respectively by the above two methods in 3 days and 7 days after antiplatelet drug maintenance treatment.
Results: There was a strong correlation between PL-MAR and VASP-PRI (Pearson r=0.77, $P<0.01$). The receiver-operator characteristic curve (ROC) analysis showed that the best cutoff point of MAR to distinguish between VASP-defined normal and HPR was 38%. The area under the curve (AUC) was 0.904 ($P<0.001$, 95%CI: 0.84-0.97). The sensitivity and specificity of PL-11 to detect HPR were 93.5%, 76.3%. There were good consistencies among the PL-11 and VASP assay in classifying patients to normal or HPR categories (after 600mg clopidogrel: Kappa=0.68, $P<0.01$; after 3 days therapy: Kappa=0.73, $P<0.01$; after 7 days therapy: Kappa=0.70, $P<0.01$).
Conclusions: Good correlations and consistencies among PL-11 and VASP assay suggested the ability of PL-11 to detect the platelet aggregation function. Further randomized studies are required to confirm the cut-off value of HPR detected by PL-11.

GW25-e5175

Point-of-care sensitive cardiac troponin I in the rapid triage of chest pain patients in emergency department

Ye Zi, Huang Ying-Xiong, Zheng Zi-Yu, Zhan Hong, Xu Jia, Jiang Peng, Liao Xiao-Xing, Li Xin
Department of Emergency, the First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China

Objectives: To evaluate the clinical effectiveness of point-of-care sensitive cardiac troponin I (POC-cTnI) in emergency department setting amongst acute chest pain patients with suspected NSTEMI.
Methods: 220 participants who suspected with NSTEMI were recruited consecutively between July 2012 and January 2013, the participants were randomized into two groups (POCT vs CLT) after having their baseline characteristics collected. In the POCT arm, patients had their POCT levels measured both at time zero of emergency attendance and 3 hours after emergency admission. In the CLT arm, patients were managed with current hospital guidelines, including a CLT-cTnT level both upon attendance and 6 hours after, while the other diagnostic and/or therapeutic managements were at the discretion of the clinician. All participants were followed for 90 days. The primary outcome measures: 1 the triage decision-making time and the duration of initial emergency stay; 2. the rate of successful home discharges within 6 hours after Emergency visit and no MACE up to 90 days. The secondary outcome measures included the duration of cardiology department/CCU stay, the subsequent outpatient's visits, emergency revisits, hospital readmissions and major adverse cardiac events over the 90 days follow-up.
Results: 216 participants were successfully followed up. 1 and 3 patients lost to follow-up in POCT arm and CTL arm respectively. The POCT arm was associated with less time on mean time of triage decision-making (246min vs 178.5min; P<0.001), reduced mean length of initial emergency stay (7.2h vs 10.1h; P<0.001), and increased rate of successful discharge at initial attendances (37/109 (33.9%) vs 9/107 (8.4%) ; OR 7.153,95%CI 3.051 to 16.774; P<0.001). Between the two arms, there was no difference in the mean duration of cardiovascular wards stay (including cardiology department and CCU) (3.1 vs 3.0; P=0.972). Nevertheless, the POCT arm has more mean inpatients days in CCU (2.0 vs 0.8,P =0.045) and less mean inpatients days in cardiology department (1.1 vs 2.3,P=0.038). At 90 days follow-up, the POCT arms had a lower rate of emergency department re-attendance (11 (10.6%) vs 22 (21.2%) ; P=0.037) and also a lower rate of hospitalization for cardio-vascular reasons (12 (11.0%) vs 24 (22.4%) ; OR 0.42,95%CI 0.200 to 0.920; P=0.030). Meanwhile, there is no difference in any adverse event of MACE, including death, non-fatal myocardial infarction, or hospitalization for cardio-vascular reasons without myocardial infarction (44 (40.4%) vs 47 (43.9%); OR 0.850, 95%CI 0.485 to 1.490; P=0.571).
Conclusions: POC-cTnI assessment could rapidly triage chest pain patients with suspected AMI. This assay could especially increase the rate of successful discharge amongst low-risk patients, while not increasing the occurrence of MACE at 90 days follow-up.

GW25-e1483

Combining fragmented QRS and TIMI score for predicting in-hospital short-term prognosis after acute myocardial infraction

Sheng Qinhui
Department of Cardiology, Peking University First Hospital

Objectives: To investigate the joint effect of fQRS and TIMI risk score on predicting short-term prognostic in patients with acute myocardial infarction.
Methods: 300 patients with AMI were conducted with retrospective analysis on patients' clinical data in order to assess the relationship between fQRS with the risk score and prognosis.
Results: (1) The fQRS with TIMI risk score would provide more sensitive and specific prediction of prognosis for AMI patients. In patients of positive fQRS, whose TIMI score $\geq$ 4 but without PCI intervention had elevated LVSD and mortality rates (p= 0.046, 0.009). In the group with TIMI score $<$ 4 and without PCI intervention treatment, these patients showed 3x and 3.5x the rates of malignant cardiac arrhythmia and mortality, respectively, when compared to the intervention group (p-values as 0.012 and 0.004).
Conclusions: (1) fQRS with TIMI risk score could increase the sensitivity and the specificity for prognosis evaluating for AMI patients. Patients of AMI with positive fQRS, who underwent early revascularization, could lower the incidence rate of cardiovascular event. And, the presence of fQRS could be used as an indication of early intervention treatment for patients with TIMI score $<$ 4.

GW25-e2312

A preliminary study of serum CA125 levels, mechanism and clinical significance in patients with acute myocardial infarction

Deng Jiahua, Pan Jiahua, Wang Qixian
First Affiliated Hospital of Kunming Medical University, Department of Cardiology

Objectives: 1 To explore the changes of serum CA125, mechanism and clinical significance in patients after AMI, and according to its fluctuation we shall assess the condition and guide the treatment of HF after AMI; 2. It's better to comprehend the pathophysiology of the HF after AMI from fluid overload of the systemic and pulmonary circulation.
Methods: 88 cases with AMI was study group, and 30 PSVT cases with normal cardiac function was control.AMI patients did physical examination to distinguish killip classifications immediately at admission respectively, Venous blood samples were taken at admission and after 48 hours from the first taken to check the serum CA125.All patients measured the hs-CRP, BNP and echocardiography at least once. There were 10 patients in critical condition and lined the deep venous catheter to monitor CVP to guide therapy in AMI group. We define $\Delta CA125$ as which $CA125_2$ divided by $CA125_1$at early AMI (myocardial infarction in 24 hours to complete the first CA125 check).
Results: 1.CA125, ΔCA125 and BNP are closely related to killip classifications; 2. CA125 after 48 hours with EF less than 50% and killip classification more than II, III, ivof the AUC respectively was 0.898, 0.877, 0.898 , 0.797, its moderate diagnosis cut-off point were more than 8.92, 7.99, 8.92, 15.0 U / mL; 3. ΔCA125 with EF less than 50% and killip classification more than II, III, ivof the AUC was 0.818, 0.930, 0.958, 0.900, its better diagnostic cut-off point is more than 2.75, 3.06 , 7.71, 8.85 in turn; 5. Accuracy that ΔCA125 identify killip classifications is better than the other; 6. CA125 is relation to hs-CRP, BNP, EF (R=0.435, 0.660, -0.677, $P<0.001$). ΔCA125 is relation to hs-CRP, BNP, EF (R=0.524, 0.559, -0.623, $P<0.001$).
Conclusions: 1 CA125 and ΔCA125 depend on cardiac function and the time of post-AMI; 2. when CA125 more than 8.92, 7.99, 8.92, 15.0 U / mL, it suggest that EF are less than 50% and killip classifications are more thanII, III, iv in turn; 3. when ΔCA125 more than 2.75 , 3.06, 7.71, 8.85, it suggest that patients EF less than 50% and killip classifications are more thanII, III, iv in turn; 4 The elevated serum CA125 values may be related to fluid overload and inflammatory.6. Necrosis myocardial cells don't elevate serum CA125; 7.The increased CVP and PCWP may be related to the serum CA125; 8. Accuracy that ΔCA125 values identify different killip classifications is better than the other.

GW25-e4282

Effect of Rosuvastatin on Atherosclerosis Plaque Biomechanics Patients with Metabolic Syndrome Using Multiple Tracking Techniques

Wang Zhiyun, Wang Zhiyun
Affiliated Hospital of Shandong Academy of Medical Sciences

Objectives: To assess the changes of the velocity, strain and strain rate on carotid atherosclerosis plaque biomechanics before and after treatment of rosuvastatin for 6 months.
Methods: 96 patients with metabolic syndrome according to the results of according to the diagnostic standard of IDF underwent the high frequency ultrasound scanning two carotid arteries in this study. Detected carotid artery intima media thickness.